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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/986,422	11/08/2001	Aulis Perala	111075	5258

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EXAMINER

OCAMPO, MARIANNE S

ART UNIT	PAPER NUMBER
1723	8

DATE MAILED: 12/19/2002

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	09/986,422	PERALA, AULIS	<i>(Signature)</i>
Examiner	Art Unit		
Marianne S. Ocampo	1723		

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) Responsive to communication(s) filed on 07 October 2002.
- 2a) This action is FINAL. 2b) This action is non-final.
- 3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) Claim(s) 1-14 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) Claim(s) _____ is/are allowed.
- 6) Claim(s) 1-14 is/are rejected.
- 7) Claim(s) _____ is/are objected to.
- 8) Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) The specification is objected to by the Examiner.
- 10) The drawing(s) filed on _____ is/are: a) accepted or b) objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) The proposed drawing correction filed on _____ is: a) approved b) disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) All b) Some * c) None of:
1. Certified copies of the priority documents have been received.
2. Certified copies of the priority documents have been received in Application No. _____.
3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) The translation of the foreign language provisional application has been received.
- 15) Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) Paper No(s). _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claim Rejections - 35 USC § 112

1. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

2. Claims 12 – 13 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

a). Both claims 12 and 13 recite the limitation “a filtering module” in line 1 of the claims. There is insufficient antecedent basis for the limitation in the claims. Is this “filtering module” different (i.e. an additional one) from the first mentioned filtering module claimed in the base claim 11, or not? For examination purposes, the examiner considered that there is only one filtering module and that the filtering module mentioned in claims 12 and 13 are not different but the same one already mentioned in the base claim 11.

Claim Rejections - 35 USC § 102

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

4. Claims 1, 3 - 4, 6 – 9 and 11 – 13 are rejected under 35 U.S.C. 102(b) as being anticipated by Fischer (US 5,180,409).

5. Concerning claim 1, Fischer discloses a filter cloth (10) composed of plurality of yarns in the transverse and longitudinal directions, the filter cloth (10) comprising a filtering portion having a structure and density according to desired filtering characteristics for separating particulate matter from a mixture of solids (particulate matter) and hot gases (or liquids), and which the filter cloth (10) is to be arranged against a filtering element (27, 29) in a filtering apparatus (20, 22), and an underside of the filter cloth (10) (i.e. the portion facing the filtering element 27, 29) comprising substantially parallel yarns (14) that are thicker than the rest of the yarns (16, 12a, 12c) of the cloth (10) and the thicker yarns (14) forming parallel channels therebetween, in order to enable the filtered liquid/gas to flow into the direction of the surface of the filtering element (27) between the filtering portion of the cloth (10) and the filtering element (27), as in figs. 1 and 3 and cols. 4 - 5. Here, the examiner has considered that the intended use clause “for separating a liquid from a mixture of solids and liquid”, to be not a distinguishing limitation, and has considered that the filter cloth of Fischer, despite being used to filter gases, being also capable of filtering liquids containing solids/particulate matter.

6. With respect to claim 3, Fischer also discloses a diameter difference between the other yarns (flattened yarns, 16) and the thicker yarns of the cloth (10) being at least 1:1.4 or more, as in claims 12 – 13 and in example 1, in col. 5.

7. With regards to claim 4, Fischer discloses at least some of the thicker yarns (14) in the underside of the filter cloth (10) having the same direction as a weft (16), as in fig. 1.

8. Concerning claim 6, Fischer discloses a batt (additional adjacent layers of filtering yarns formed by yarns 14, 12B & 12C) has been needled to the filtering portion (an upper surface of a lower layer of filter cloth 10) of an upper surface of the filter cloth (10) (surface facing away from the filtering element (27) to obtain a denser structure, as in figs. 1 and 3.

9. Regarding claim 7, Fischer also discloses a filtering module (10) to be arranged on a filtering element (27) by means of a filtering apparatus (20) wherein the filtering module is made of a filter cloth (10) comprising a filtering layer composed of yarns in the transverse and longitudinal directions, and an underside of the filter cloth (the surface against the filtering element 27) being comprised of substantially parallel yarns (14) which are thicker than the other yarns (16, 12a, 12c) of the cloth (10) wherein a gas (or liquid) to be filtered by the cloth is allowed to flow in the direction of a surface of the filtering element (27, 29), as in figs. 1 and 3 and in cols. 4 - 5. Here, the examiner has considered that the intended use clause “for separating a liquid from a mixture of solids and liquid”, to be not a distinguishing limitation, and has

considered that the filter cloth of Fischer, despite being used to filter gases, being also capable of filtering liquids containing solids/particulate matter.

10. With respect to claim 8, Fischer further discloses the filter cloth (10) being arranged such that the channels in the bottom of the cloth (10) are directed according to the structure of the filtering module, as in fig. 3.

11. Concerning claim 9, Fischer discloses the filter cloth (10) being arranged such that the channels in the bottom of the cloth (10) are directed such that the channels lead the filtered gas/liquid to openings in the filtering element (27), as in fig. 3.

12. Regarding claim 11, Fischer discloses a filtering apparatus (20) comprising a filtering module (10) and a filtering element (27) wherein the filtering module is arranged on a filtering element (27) as a filtering surface where a gas/liquid could be separated from a (fluid) mixture of solids/particulate matter and gas/liquid, the filtering module being made of a filter cloth (10) comprising a filter layer composed of yarns in the transverse and longitudinal directions and an underside of the filter cloth (surface against the filtering element 27) comprising of substantially parallel yarns (14) that are thicker than the other yarns (12a, 12c, 16) of the cloth (10) and channels being formed between the thicker yarns (14) wherein a liquid/gas being filtered by the filter cloth (10) is allowed to flow in the direction of the surface of the filtering element (27), as in figs. 1 and 3. Here, the examiner has considered that the intended use

clause “for separating a liquid from a mixture of solids and liquid”, to be not a distinguishing limitation, and has considered that the filter cloth of Fischer, despite being used to filter gases, being also capable of filtering liquids containing solids/particulate matter.

13. With regards to claim 12, Fischer also discloses the filtering module (10) being arranged such that the channels in the bottom of the cloth are directed according to a structure of the filtering module, as in fig. 3.

14. Concerning claim 13, Fischer discloses the filtering module is arranged such that the channels in the bottom of the cloth (10) are directed such that the channels lead the filtered gas/liquid to openings in the filtering element (27), as in fig. 3.

Claim Rejections - 35 USC § 103

15. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

16. Claim 2 is rejected under 35 U.S.C. 103(a) as being unpatentable over Fischer (409).

17. Regarding claim 2, Fischer also discloses the thicker yarns (14) being monofilaments and that at least the yarns of the filter cloth (10) parallel with the thicker yarns (16 or 12a, 12c) in the bottom and located at the thicker yarns being multifilament yarns, thus forming a denser cloth also at the thicker yarns, as in fig. 1. Although Fischer does not disclose the multifilament yarns (16, 12a, 12c) being moulded at the thicker yarns, it is considered obvious to one of ordinary skill in the art that the prior art product (filter cloth of Fischer) although made from a different process from the process (i.e. involve the moulding of the multifilament yarns to the thicker yarns) forming the claimed invention, the prior art product is considered at least an obvious variation of the claimed invention. See In re Thorpe, et al., No. 85-1913 (11-21-85) 227 USPQ pages 964 – 966. Claim 2 is an example of a product by process claim. The patentability of a product by process claim is based upon the product itself, even though the claim is limited and defined by process, and therefore, the product in such a claim is unpatentable if it is the same as, or obvious from the product of the prior art, even if the product of the prior art had been made by a different process.

18. Claims 5, 10 and 14 are rejected under 35 U.S.C. 103(a) as being unpatentable over Fischer in view of Kavesh et al. (US 4,897,902).

19. With respect to claims 5, 10 and 14, Fischer fails to disclose at least some of the yarns of the filter cloth being heat-shrinkable, as in claim 5 and the filtering module (i.e. the filter

cloth) comprising heat-shrinkable yarns, as in claims 10 and 14. Kavesh et al. teach fabrics, in particular, filter cloths, being composed of/comprising heat-shrinkable (multifilament) yarns of ultra molecular weight polyethylene, as in the abstract and in cols. 3 – 5. It is considered obvious to one of ordinary skill in the art of fluid filtration to modify the filter cloth of Fischer by substituting at least some of the yarns (i.e. the multifilament yarns) of the filter cloth of Fischer, or forming the entire filtering module/filter cloth of Fischer, to that of heat-shrinkable yarns taught by Kavesh et al., in order to provide an improved filter cloth/filtering module which has increased liquid and/or gas permeability and dimensional stability, as well increased ability to adhere or be attached to adjacent fibers or surfaces the filter cloth/module need to be adhered or attached thereto (see col. 5, lines 13 – 33).

Response to Amendments and Arguments

20. Applicant's arguments with respect to claims 1 - 14 have been considered but are moot in view of the new grounds of rejection presented above. **This action is non-final.**

Conclusion

21. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. US Patents 6,030,905 (Striegl et al.), 5,728,299 (Tokudome et al.) and 5,615,713 (Benesi).

22. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Marianne S. Ocampo whose telephone number is (703) 305-1039. The examiner can normally be reached on Mondays to Fridays from 8:00 A.M. to 4:30 P.M..

23. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Wanda Walker can be reached on (703) 308-0457. The fax phone numbers for the organization where this application or proceeding is assigned are (703) 872-9310 for regular communications and (703) 872-9311 for After Final communications.

24. Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0661.

M.S.O.
M.S.O.
December 12, 2002

Walker
W. L. WALKER
SUPERVISORY PATENT EXAMINER
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